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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,560	11/10/1999	DAVID J. KURLANDER	662005.469C1	8160

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EXAMINER

PILLAI, NAMITHA

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/437,560

Applicant(s)

KURLANDER ET AL.

Examiner

Namitha Pillai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-22 and 26-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 14-22 and 26-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 22 is rejected under 35 U. S. C. 112 for reciting the limitation "UIOS" in reference to user interface output state. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-22 and 26-37 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U. S. Patent No. 5, 801, 687 (Peterson et al.).

Referring to claim 14, Peterson discloses a data processing system including a display device and a processing means for running an application program (Figure 1), the application program having a user interface with a plurality of User Interface Output States (UIOSes) and a plurality of operators, each operator for transforming a currently displayed UIOS to a displayed next UIOS (column 2, lines 38-41). Peterson discloses providing a user interface output system for controlling the generation of a user interface output sequence (column 2, lines 36-42).

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Peterson discloses providing a specification identifying a plurality of goal UIOSes for the user interface output system to establish and identifying the plurality of operators, each of the operators having at least one precondition to be satisfied before the operator can be performed (column 3, lines 16-28), wherein the various output states, are the goal UIOSes based on the user's selections. Peterson also discloses providing a compiler, for compiling the specification which results in a user interface output controller distinct from the application program, the user interface including a plurality of plans, each of the plans having a series of operators (column 6, lines 1-5), a start UIOS and one of the goal UIOSes, the series of operators for transforming the start UIOS to at least one intermediate UIOS to the goal UIOS, the operators in the series such that the preconditions of each of the operators in the series are satisfied after performance of earlier operators in the series, as is described in the functionality of the state machine of Peterson (column 8, lines 5-8 and Figure 1). Peterson discloses while the application program is running on the processing means (column 6, lines 42-47) providing the user interface output controller with an event received from the application program, the event identifying one of the goal UIOSes, determining a currently displayed UIOS, retrieving one of the plurality plans such that the start UIOS of the retrieved plan is the currently displayed UIOS and the goal UIOS of the retrieved plan is the goal UIOS identified by the event (column 12, lines 21-28). Peterson discloses performing the series of operators provided by the retrieved plan to display the start UIOS followed by the at least one intermediate UIOS followed by the goal UIOS (column 27, lines 47-51).

Referring to claim 15, Peterson discloses providing events which may be specified by the application program and for which the user interface output system provides user interface

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output sequences (column 2, lines 38-41). Peterson discloses providing state variables that define attributes of each user interface output state (column 20, lines 51-56) and providing operators that identify actions, which are used to modify the attributes of each user, interface output state (column 21, lines 1-6).

Referring to claim 16, Peterson discloses including timing directives, which determine the time at which an action is performed (column 19, lines 31-33).

Referring to claim 17, Peterson discloses providing state class definitions, which are hierarchical groupings of state variables (column 6, lines 29-33).

Referring to claim 18, Peterson discloses providing autonomous action sequences identifying actions which are performed by the user interface output system when a current user interface output state contains predefined values for conditions which capture attributes of the current user interface output state (column 12, lines 1-12 and lines 21-28).

Referring to claim 19, Peterson discloses applying a planning methodology to generate each of the plans (column 11, lines 5-10).

Referring to claim 20, Peterson discloses applying a planning methodology to generate each of the plans, including selecting each of the plurality of goal UIOSes (column 11, lines 5-10). Peterson discloses for each selected goal UIOS, selecting each of the plurality of operators, performing an inverse of the selected operator on the selected goal UIOS and when the operators transforms the selected goal UIOS into a new UIOS, storing the new UIOS along with the selected operator (column 27, lines 35-46).

Referring to claim 21, Peterson discloses the new UIOS is identified as an intermediate UIOS and is then processed as a goal UIOS (column 27, lines 47-51).

Referring to claim 22, Peterson discloses a data processing system with a display device and processing means for running an application program (Figure 2 and 3). Peterson discloses providing a user interface output controller, represented as a state machine, which generates a user interface output sequence, the user interface output controller distinct from the application program (column 2, lines 35-42), wherein the output controller is in the tool and the application program is the software title as seen in Figure 3, thus showing the distinction, the user interface output sequence including a first user interface output state and a second user interface output state, the first user interface output state and the second user interface output state each including a set of conditions representing values which capture attributes of that user interface output state (column 5, lines 49-59 and column 12, lines 21-29). Peterson discloses under the control of the user interface output controller, receiving operators from the application program, wherein the operators are based on the actions by the user from the application program, each operator having a precondition consisting of one of the conditions in the set, and a required value for the condition such that the operator can only be performed when a current user interface output state satisfies the precondition by including the condition representing the required value, wherein the current state of the screen and conditions in the screen, allows for the user to carry out an operator, whether it be selecting a dog on the screen, wherein the condition of a dog sitting or a dog present must be satisfied in order for the users to choose an operation (column 3, lines 18-21 and column 12, lines 1-12). Peterson discloses after receiving the operators, receiving an event from the application program specifying a goal to be achieved by the user interface output sequence and upon receiving the event from the application program, determining conditions which temporally precede the event and establishing the determined conditions which precede

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the event (column 3, lines 15-25). Peterson also discloses performing a plurality of the received operators to transform the first user interface output state into the second user interface output state, which establishes the event, the plurality such that a first operator of the plurality has a precondition which is satisfied by a current user interface output state and wherein after the performance of each operator in the plurality resulting UIOS satisfies the precondition for the operator next in the plurality, determining conditions which temporally follow the event and establishing the determined conditions which follow the event, the conditions being stated to transition from state to state through conditions statements (column 5, lines 49-59 and column 12, lines 21-29).

Referring to claim 26, Peterson discloses a data processing system with a display device for displaying a sequence of a plurality of user interface output states (reference number 108, Figure 1 and column 2, lines 35-41). Peterson also discloses a processing means for running an application program (column 1, lines 48-49, column 2, lines 35-41 and reference number 104, Figure 1) and for providing a user interface output system for controlling the generation of the sequence (column 10, lines 60-63), wherein the multimedia product referred to as the software title is the application and the tool consisting of the state machine and transient event modules represent the controllers for the user interface output system (Figures 3 and 5). Peterson discloses a means for identifying goal UIOSes for the user interface output system to establish and identify a plurality of operators, each operator for transforming one UIOS to another UIOS such that a precondition of the operator is established by the one UIOS and such that a post condition of the operator is established in another UIOS (column 2, lines 44-51). Peterson also discloses a means for compiling the specification to generate a user interface output controller

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distinct from the application program (column 10, lines 56-67 and column 11, lines 1-4), the distinction shown in Figures 3 and 5 between the software title and the tool. Peterson discloses storing the user interface output controller in memory (column 9, lines 18-20), and receiving an event from the application program, the event identifying one of the goal UIOSes (column 12, lines 2-7 and lines 22-28), wherein the event is received from the application through the display shown to the user, and wherein the goal UIOS is represented by the state B wherein a transition is made to based on the event received. Peterson also discloses means for determining the current UIOS in the sequence (column 12, line 22) and the series of operators which transform the determined current UIOS into the identified one of the goal UIOS (column 13, lines 23-27). Peterson also discloses performing the series of operators to display the sequence on the display device to transform the determined current UIOS into at least one intermediate UIOS and then into the identified one of the goal UIOSes (column 27, lines 47-51).

Referring to claims 27, 30, Peterson discloses the received event identifying a timing specification, which determines the time at which the series of operators are performed (column 19, lines 31-35).

Referring to claims 28, 31, Peterson discloses using this timing specification to transition, wherein this transition process allows for the timing information to be incorporated into the sequence (column 19, 33-35).

Referring to claim 29, Peterson discloses a user interface output system for controlling generation of a user interface output sequence by identifying goal user interface output states, which identify user interface output states for the user interface output system to establish and for identifying operators which specify actions to be performed by the user interface output

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sequence each of the operators having at least one precondition to be satisfied before the operator can be executed (column 12, lines 21-28). Peterson also discloses a means for compiling the specification to generate a user interface output controller distinct from the application program (column 10, lines 56-67 and column 11, lines 1-4), the distinction shown in Figures 3 and 5 between the software title and the tool. Peterson discloses storing the user interface output controller in memory (column 9, lines 18-20), and receiving an event from the application program, the event identifying one of the goal user interface output states (column 12, lines 2-7 and lines 22-28), wherein the event is received from the application through the display shown to the user, and wherein the goal UIOS is represented by the state B wherein a transition is made to based on the event received. Peterson also discloses means for determining the current UIOS in the sequence (column 12, line 22) and the series of operators which transform the determined current UIOS into the identified one of the goal UIOS (column 13, lines 23-27). Peterson also discloses performing the series of operators to display the sequence on the display device to transform the determined current UIOS into at least one intermediate UIOS and then into the identified one of the goal UIOSes (column 27, lines 47-51). Peterson discloses that identifying that preconditions of the next operator are satisfied after execution of the current operator, other than a last operator (column 12, lines 22-25), wherein as seen by the state diagram, the last operator for the last stage does not have transition means and hence, the conditional statement disclosed in column 12, lines 22-25, would not apply. As seen by the flow diagram implemented in Figure 16, Peterson discloses a means for executing the sequence of operators to transform the determined current user interface output state into the at least one intermediate user interface output state and then into the identified one of the goal user interface output states so as to

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display the sequence of operators on a display device, the operators being displayed through user interaction (column 12, lines 1-10).

Referring to claim 32, Peterson discloses a user interface output controller for generating a user interface output sequence, the user interface output controller distinct from an application program (column 10, lines 57-62), the distinction shown in Figures 3 and 5 between the software title and the tool. Peterson discloses receiving an event from the application program, the event identifying one of the goal user interface output sequence by displaying a series of a plurality of user interface output states (column 3, lines 18-27), each of these states being represented in the state display map as disclosed in column 5, lines 66-67 and column 6, line 1. Peterson discloses using the state machine to generate the user interface output sequence for achieving the goal user interface output sequence by transitioning through a state machine (column 2, lines 38-41), wherein as stated in Figure 16, the flow diagram repeatedly processed to transition through a state machine based on operations performed by the user and the conditional statement, a plurality of operators which trigger the execution and based on whether predefined conditions are true will display the plurality of user interface output states (column 12, lines 22-28). The transitioning through the state machine determine the user interface output states is done through triggers, and the conditional statement, wherein for each current state, with a next state, there must be a precondition of the first of the plurality of operators in the sequence ordered such that the execution of the previous operators will establish in the sequence as true conditions which is necessary for execution of a next operator in the sequence, this being the basis for a state machine as disclosed by Peterson (column 12, lines 22-28). Peterson also discloses that as the plurality of operators are executed and predefined set of conditions are true, the state machine

transitions from state to state, so as to display the series of the plurality of user interface output states on a display device (column 17, lines 16-19).

Referring to claim 33, Peterson discloses a data processing system including a display device and a processing means running an application program, having a user interface (Figure 1) with a current User Interface Output State (UIOS) displayed on the display device (column 5, lines 61-64). Peterson discloses providing a user interface output controller for displaying the user interface, the user interface output controller distinct from the application program, wherein the controller is in the tool and the application program is the software title, the distinction being shown in Figure 3 (column 10, lines 60-67). Peterson discloses that under the control of the application program, without knowledge of the current UIOS displayed on the display device, determining a goal UIOS to be displayed on the display device (column 17, lines 1-13). Peterson discloses sending to the user interface output controller an indication of the goal UIOS and under control of the user interface output controller, receiving from the application of the indication of the goal UIOS (column 17, lines 3-5). Peterson discloses determining the current UIOS and determining a sequence of a plurality of operators based on the determined current UIOS and the goal UIOS (column 2, lines 42-52). As seen by Figure 1, Peterson discloses that for each of the operators in sequence, performing the operator to transition the user interface from the current UIOS to a different resulting UIOS, the performing such that the resulting UIOS is displayed on the display device and becomes the current UIOS and such that the current UIOS after all the operators are performed is the goal UIOS (column 2, lines 45-51), the sequence such that the preconditions for a first operator in the sequence are currently established and such that the preconditions for all other operators in the sequence are established after execution of earlier

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operators in the sequence (column 12, lines 20-28). Peterson also discloses that the application program specifies the goal UIOS without knowledge of the current UIOS, and in response the user interface output controller determines a sequence of operators that when performed transition the user interface from the current UIOS through at least one displayed intermediate UIOS to the displayed goal UIOS (column 17, lines 1-14).

Referring to claim 34, Peterson discloses that the determined sequence of the plurality of operators is generated after receiving of the indication of the goal UIOS (column 17, lines 15-20).

Referring to claim 35, Peterson discloses that each UIOS has a value for each of a plurality of UIOS variables, wherein each operator has a precondition of a UIOS variable and a required value for the UIOS variable, wherein an operator having a precondition of a first variable and a first value can only be performed when the current UIOS satisfies the operator precondition by having a value for the first variable that is equal to the first value, wherein the determined sequence begins with a first operator whose precondition is satisfied by the determined current UIOS, and wherein after the performance of each operator in the determined sequence, the resulting UIOS satisfies the precondition for the operator next in the determined sequence (column 21, lines 7-20).

Referring to claim 36, Peterson discloses identifying the UIOS variable whose value in the goal UIOS is different than in the current UIOS (column 20, lines 52-57). Peterson discloses selecting a last operator such that the resulting UIOS from performing the last operator has a value for the identified UIOS variable that is equal to the value for the identified UIOS variable in the goal UIOS (column 20, lines 55-57). Peterson discloses selecting an initial operator such

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that the resulting UIOS from performing the initial operator satisfies the precondition of the last operator (column 21, lines 1-5). Peterson discloses until the current UIOS satisfies the precondition of the initial operator, repeatedly performing the steps of designating the initial operator to be an intermediary operator and selecting an initial operator such that the resulting UIOS from performing the initial operator satisfies the precondition of the operator most recently designated to be the intermediary operator, determining the plurality of operators to be selected operators and determining the sequence of the plurality of operators to be a reverse of the selection order (column 17, lines 15-24).

Referring to claim 37, Peterson discloses a method for displaying user interface information for a plurality of application programs each having a distinct user interface and an operator set consisting of a plurality of operators (column 25, lines 1-9). Peterson discloses the operators having at least one precondition, which must be established before the operator can be performed (Figure 1 and column 12, lines 20-29). Peterson also discloses providing wherein the multimedia product referred to as the software title is the application and the tool consisting of the state machine and transient event modules represent the controllers for the user interface output system (Figures 3 and 5), therein showing the distinction. Peterson discloses under control of the user interface output controller and for each of the programs through which this controller can be applied to, receiving from the application program the operator set for the application program (column 6, lines 1-5). Peterson discloses after receiving the operator set, receiving from the application program a plurality of user interface goals, each user interface goal reflecting information to be displayed in the user interface for the application program (column 27, lines 47-51). Peterson discloses that for each user interface goal, achieving the user

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interface goal by determining the information currently displayed in the user interface for the application program and after receiving the user interface goal, determining a series of operators from the operator set for the application program that will transition the user interface for the application program from displaying the determined information to displaying the information reflected by the user interface goal (column 2, lines 42-51), the series such that the preconditions for a fast operator in the series are currently established and such that the preconditions for all other operators in the series are established after execution of earlier operators in the series (column 12, lines 21-29). Peterson discloses that executing the determined series of operators in sequence such that the information reflected by the user interface goal is displayed when executing is complete (column 2, lines 47-51). Peterson also discloses executing user interface output controller can receive a set of operators and a plurality of user interface goals from each of the plurality of application programs, and can determine for each user interface goal the series of operators from the operator set for the application program that when execute in sequence will achieve the user interface goal (column 25, lines 1-25).

Response to Claim Changes

3. The Examiner acknowledges the corrections to claims to overcome the 35 U. S. C. 112 rejections. Nonetheless, all claims have been rejected under 35 U. S. C. 102, in light of previous art found in a further search.

Conclusion

4. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach a

method for relying on a user interface output controller to determine the goal user interface output state.

Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington D.C. 20231.

If applicant desires to fax a response, (703) 746-7238 may be used for formal After Final communications, (703) 746-7239 for Official communications, or (703) 746-7240 for Non-Official or draft communications. NOTE: A Request for Continuation (Rule 60 or 62) cannot be faxed. Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document. Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Namitha Pillai whose telephone number is (703) 305-7691. The examiner can normally be reached on 8:30 AM - 5:30 PM.

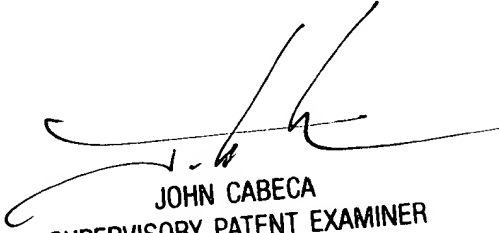
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Namitha Pillai
Assistant Examiner
Art Unit 2173
September 22, 2003



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